

Application Serial No. 09/721,141

**REMARKS**

The Applicant and the undersigned thank Examiner Irshadullah for the careful review of this application. Claims 40-49 have been rejected. Upon entry of this amendment, Claims 40-49 remain pending in this application. The independent claims are Claims 40, 43 and 44. Consideration of the present application is respectfully requested in light of the above amendments to the application and in view of the following remarks.

A marked-up version of the changes made to the claims is not being submitted since the claims listed above have been submitted according to the new procedures entitled, "USPTO ANNOUNCES PROTOTYPE OF IMAGE PROCESSING," and cited in 1265 Off. Gaz. Pat. Office 87 (Dec. 17, 2002) ("Prototype Announcement") and in 1267 Off. Gaz. Pat. Office 4 (February 25, 2003). If the Examiner believes the present amendment to be non-responsive because a marked-up version of the claims is not present, Examiner Irshadullah is invited to contact the undersigned to discuss the matter prior to the Examiner issuing such a non-responsive notice.

**Information Disclosure Statement**

The Applicant submitted the attached information disclosure statement (IDS) with the appropriate IDS processing fee for the Examiner's consideration with their response of December 19, 2002. However, the Examiner did not provide the Applicant with an initialed copy of the IDS in the Office Action mailed on March 4, 2003.

Attached is a courtesy copy of this IDS that was submitted on December 19, 2002. The Applicant reminds that Examiner that copies of the references listed on the attached IDS are not required since they were cited in the parent application (U.S. App. Ser. No. 08/786,489 filed on January 21, 1997) and because the present application claims priority to this parent application. See 37 CFR § 1.98(d)(1)&(2). Consideration and an initialed copy of the attached IDS originally filed on December 19, 2002 are respectfully requested.

Application Serial No. 09/721,141

Claim Rejections under 35 U.S.C. § 102(e) and § 103(a)

The Examiner rejected claims 40, and 43-48 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,893,074 to Hughes et al (hereinafter the "Hughes reference"). The Examiner also rejected claims 41, 42, and 49 under 35 U.S.C. § 103(a) as being unpatentable over the Hughes reference in view of U.S. Patent No. 5,406,476 to Deziel, Jr. et al (hereinafter the "Deziel reference"). The Applicant respectfully offer remarks to traverse these pending rejections.

Independent Claims 40, 42, and 49

The rejection of Claims 40, 42, and 49 are respectfully traversed. It is respectfully submitted that the Hughes and Deziel references fail to describe, teach, or suggest the recitations enumerated in amended independent Claims 40, 42, and 49. These references fail to describe, teach, or suggest an apparatus or steps for (1) determining assignments that are independent of other assignments; (2) determining assignments that have task constraints; (3) scheduling the assignments that have task constraints before the assignments that are independent of other assignments; (4) scheduling the assignments that are independent of other assignments; and (5) generating a schedule comprising the N assignments, whereby the schedule is balanced and maximizes utilization of resources.

Support for these steps can be found in the specification in Figure 5 and its corresponding description. Specifically, page 23, line 14 through page 24, line 10 provides support for the current amendment. Further, Tables 2 and 3 found on page 21 demonstrate one goal of the invention as claimed which is to achieve a balanced schedule.

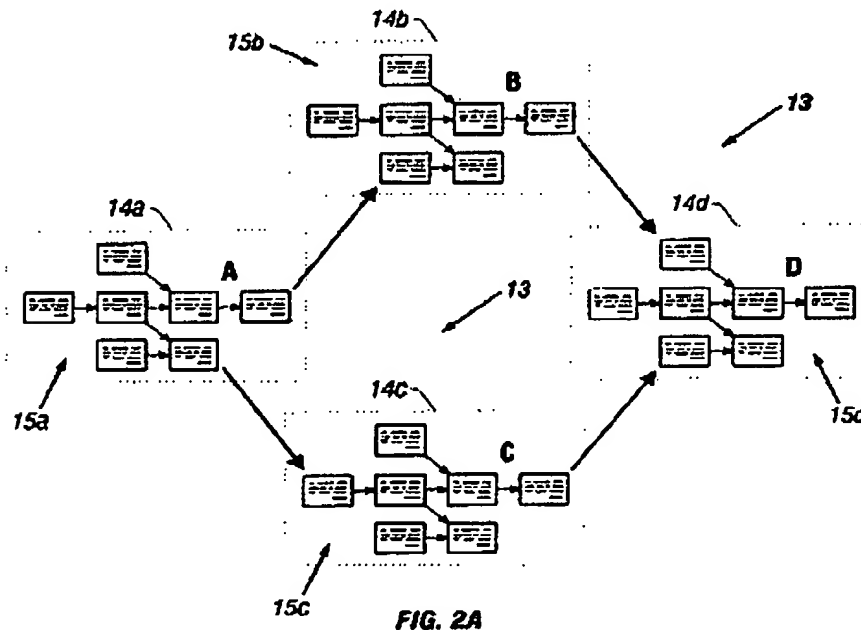
Regarding the prior art applied by the Examiner, as taught on page 1, lines 29-36, of the Background section of the present application, the critical path method (CPM) of scheduling is used in a significant number of conventional scheduling programs. Conventional CPM scheduling generally operates by receiving a list of tasks, where each task has varying restrictions or constraints. More specifically, each task can have a set of restrictions or constraints which dictate when and how long the task should be performed.

Application Serial No. 09/721,141

Conventional CPM scheduling programs are most beneficial for projects in which the tasks have dependencies on each other. Because of this, they are well suited for product-oriented projects which inherently have tasks that must be performed in a specific order. CPM scheduling programs typically do not produce meaningful results when the tasks do not have dependencies. See Background section of the present application, page 2, lines 28-37.

A schedule produced by a conventional CPM program in which resources are overloaded and/or under-utilized is referred to as an "unbalanced schedule." Conventional CPM scheduling programs are susceptible to producing unbalanced schedules. See Background section of the present application, page 3, lines 23-37

In light of the above mentioned excerpts of the Background section of the present application, one of ordinary skill in the art recognizes that the Hughes reference describes a CPM scheduling program as evidenced by its detailed description that states that the contracts monitored by the program "relate in some way to the production of a product." See Hughes reference, Column 4, lines 25-34. Figure 2A of the Hughes reference illustrates large tasks 14a-14d that comprise smaller tasks 15a-15d. The larger tasks 14a-14d may involve science and project engineering, instrument development,



Application Serial No. 09/721,141

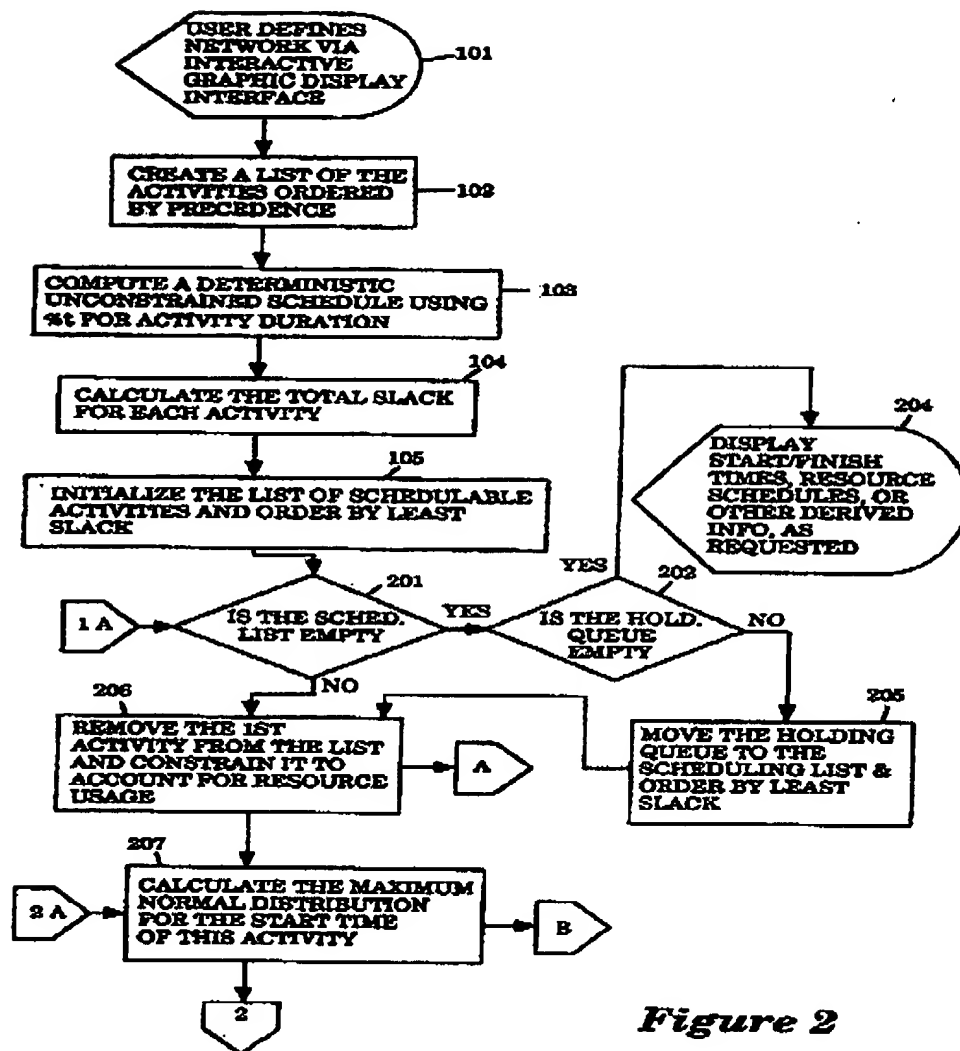
and spacecraft system development for a large-scale project such as manufacture of a NASA spacecraft. See Hughes reference, Column 5, lines 45-51.

The smaller tasks 15a-15d may involve contracts for products between each of the employees (i.e. suppliers or receivers) under a Manager's control. The status of each product in the project is negotiated and analyzed through the use of the CPM scheduling system. See Hughes reference, Column 5, line 64, through Column 6, line 5.

Therefore, in light of the product emphasis where each task has dependency on another task of the Hughes reference, one of ordinary skill in the art recognizes that such a reference does not teach determining assignments that are independent of other assignments, scheduling assignments that have task constraints before the assignments that are independent of other assignments; and scheduling the assignments that are independent of other assignments, whereby the schedule is balanced and maximizes utilization of resources.

Similar to the Hughes reference, the Deziel reference employs CPM scheduling techniques. For example, in step 104 illustrated in Figure 2 of Deziel, a total slack time is determined from a deterministic CPM schedule of the project. Slack time, as defined by the Deziel reference, is the amount of time that may be lost to activity delay without having a delaying effect upon the whole project. The Deziel reference goes on to explain that activities on the critical path have zero slack time because any delay would extend the entire project. See the Deziel reference, Column 8, lines 27-33. See Figure 2 of the Dexiel reference reproduced below.

Application Serial No. 09/721,141

**Figure 2**

In light of this CPM focus as evidenced by Figure 2, one of ordinary skill in the art recognizes that the Deziel reference does not teach determining assignments that are independent of other assignments, scheduling assignments that have task constraints before the assignments that are independent of other assignments; and scheduling the assignments that are independent of other assignments, whereby the schedule is balanced and maximizes utilization of resources.

Therefore, it is apparent to one of ordinary skill in the art the Hughes and Deziel references, alone or in combination, cannot anticipate or render obvious the recitations as

Application Serial No. 09/721,141

set forth in amended independent Claims 40, 43, and 44. Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

Dependent Claims 41-42, and 45-49

The Applicant respectfully submits that the above-identified dependent claims are allowable because the independent claims from which they depend are patentable over the cited references. The Applicant also respectfully submits that the recitations of these dependent claims are of patentable significance.

CONCLUSION

The foregoing is submitted as a full and complete response to the Office Action mailed on September 30, 2002. The Applicant and the undersigned thank Examiner Irshadullah for the consideration of these remarks. The Applicant has submitted remarks to traverse the rejections of Claims 40-49. The Applicant respectfully submits that the present application is in condition for allowance. Such Action is hereby courteously solicited.

Application Serial No. 09/721,141

If the Examiner believes that there are any issues that can be resolved by telephone conference, or that there are any formalities that can be corrected by an Examiner's Amendment, please contact the undersigned in the Atlanta Metropolitan Area at (404) 572-2884.

Respectfully submitted,



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